

REMARKS

Supplemental Information Disclosure Statement

In reply to previous Office actions in this application, applicant argued that U.S. Patent No. 6,295,306 (Asami) was not properly cited against the pending claims. Applicant still maintains that position. However, in a prior reply, applicant also noted that it was possible that a counterpart foreign application had been published and might be prior art with respect to the pending application. Applicant's attorney has identified Japanese patent document 11-40883, published February 12, 1999, as such a counterpart foreign application. A copy of that publication is enclosed with the supplemental information disclosure statement submitted herewith.

The Office action

The claims were rejected as follows:

- * Claims 1 and 3-7 were rejected as unpatentable over Applicant's admitted prior art FIGS. 7 and 8 in view of FIG. 6.

- * Claim 2 was rejected as unpatentable over Applicant's admitted prior art in view of U.S. Patent No. 6,295,306 (Asami).

- * Claims 1 and 3-7 also were rejected as unpatentable over Applicant's admitted prior art (FIGS. 7 and 8) in view of either U.S. Patent No. 6,333,910 (Nishikawa et al.) or 6,434,173 (Tuganov et al.).

As discussed below, applicant respectfully requests reconsideration.

The Law of Obviousness

A claimed invention is unpatentable due to obviousness if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art." 35 U.S.C. § 103(a).

As discussed by the Court of Appeals for the Federal Circuit, a proper conclusion of obviousness under 35 U.S.C. § 103 requires that there be some motivation in the prior art that suggests the claimed invention as a whole:

[A]n Examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be “an illogical and inappropriate process by which to determine patentability.” [Citations omitted] To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show motivation to combine the references that create the case of obviousness.

In re Rouffet, 149 F.3d 1350, 1357; 47 USPQ2d 1453, 1457-1458 (Fed. Cir. 1998). As further explained by the Federal Circuit:

Our case law makes clear that the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references. See *Dembiczak*, 175 F.3d at 999, 50 USPQ2d at 1617. “Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.” *Id.*

“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references.” *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998) (citing *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)).

Ecolochem, Inc. v. Southern California Edison Co., 56 USPQ2d 1065, 1072-73 (Fed. Cir. 2000). The showing of the motivation to combine must be “clear and particular.” See, e.g., *C.R. Bard*,

Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998); *Teleflex, Inc. v. Ficosa North Am. Corp.*, 63 USPQ2d 1374 at 1387 (Fed. Cir. 2002).

The Claimed Subject Matter is Patentable Over the Cited References

The pending claims recite a tunable light source that includes a mirror positioned to suppress mode hopping. A direct drive system drives rotation of the mirror using a motor having a rotation shaft in the mirror's center of rotation.

Claims 1 and 3-7 were rejected as allegedly unpatentable over the combination of FIGS. 7-8 of applicant's specification in view of either applicant's FIG. 6, the Nishikawa et al. patent, or the Tuganov et al. patent. Such an attempt to reconstruct the claimed subject matter in that way is precisely the type of improper hindsight the Federal Circuit has warned against. Indeed, it is readily apparent that the Office action has improperly used the claimed invention itself "as a blueprint for piecing together elements in the prior art."

First, applicant's specification (at pages 6-7) criticizes the embodiment of FIG. 6. In particular, applicant's specification explains that one problem that occurred with the configuration of FIG. 6 related to mode hopping. Applicant's specification (at page 3) explains that one way of addressing that problem was through the embodiment of FIGS. 7 and 8. However, applicant's specification also criticizes that configuration, noting problems such as backlash, stick slip and torque fluctuations. It is the applicant who recognized those problems and identified a new configuration to address them, while at the same time obtaining suppression of mode hopping.

In contrast, the Office action selectively identifies elements from those prior art configurations with the knowledge of applicant's invention. The fact that the embodiment of FIGS. 7 and 8 used a drive system where the motor did not have a rotation shaft in the center of rotation of the mirror (as in FIG. 6) would have suggested that use of the drive system of FIG. 6 was undesirable. Therefore, there would have been no motivation (absent the knowledge of

applicant's invention) for one of ordinary skill in the art somehow to combine the configuration of FIGS. 7 and 8 with the configuration of FIG. 6.

The Tuganov et al. patent relates to a tunable laser system. FIG. 11C illustrates a system in which tuning may be accomplished by rotating/translating a retroreflector 1126 (such as a mirror) which is pivotally fastened to the base 1100 at pivot point 1112 through the compensating element 1118 and pivot arm 1110.

Although the Tuganov et al. patent discloses rotation of the retroreflector 1126, there is no indication that the motor driving the retroreflector has a rotation shaft in the retro reflector's center of rotation. Instead, the center of rotation is simply identified as a pivot point 1112. As further explained in connection with FIG. 3 (*see* col. 7, lines 1-20), movement of the retroreflector 350, which is attached to a pivot bracket 354, is caused by linear translation of a drive train 376 of an actuator (*e.g.*, a motor) 370. There is no indication that the actuator/motor 370 has a rotation shaft in the center of rotation of the retroreflector 350.

The Nishikawa et al. patent relates to an optical disc drive system. A reflection mirror 31 is attached to a rotary arm 3, which is supported by a shaft 5 through bearings 17. The rotary arm 3 (and thus the mirror 31) rotates about the shaft 5. Thus, as the mirror is rotated, the angle of incidence changes so that a fine tracking is performed. (Abstract)

In contrast to the pending application and the Tuganov et al. patent, the Nishikawa et al. patent has nothing to do with a tunable light source, let alone a tunable light source that suppresses mode hopping. Therefore, a person of ordinary skill in the art who was trying to address problems such as mode hopping and torque fluctuations in a tunable light source would not have looked to the Nishikawa et al. patent. As explained above, the reason for rotating the mirror 31 in the Nishikawa et al. patent (*i.e.*, to achieve fine tracking) is completely unrelated to the functionality of a tunable light source, such as a laser.

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Serial No. : 10/008,448
Filed : December 7, 2001
Page : 6 of 6

Attorney's Docket No.: 10830-082001 / A36-
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Nor does the Asami patent, which serves as a basis for rejecting claim 2, provide the missing motivation to combine the references so as to obtain the claimed subject matter.

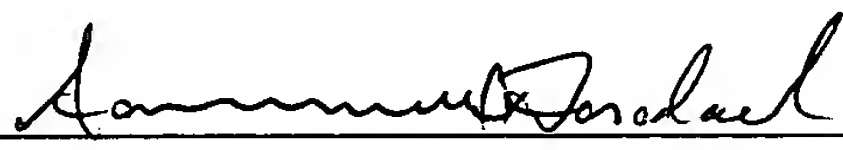
Applicant also notes that the reliance in the Office action on the decision *In re Japiske* (at page 3) is misplaced. That decision was rendered in 1950, before the current Patent Act was enacted. Under the current law, 35 U.S.C. § 103, and court decisions interpreting that section (some of which are discussed above), there must be a "clear and particular" motivation to combine the cited references so as to obtain the claimed subject matter. For the reasons discussed above, there would have been no such motivation.

In view of the foregoing remarks, applicant respectfully requests reconsideration and withdrawal of the rejections of the claims.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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